year 1990-91 under the Technology Mission on Immunisation;

(c) if so, what is the strategy for meeting the above target, particularly with regard to production of oral polio vaccine and inactivated polio vaccine; and

(d) what is the detailed time table of indigenising manufacture of polio vaccines in India?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND THE MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, *ATOMIC ENERGY, ELECTRONICS* AND SPACE (SHRI K. R. NARAYANAN): (a) Yes Sir, Polio is a serious disease which afflicts children, especially upto 2 years of age. The number of cases of polio reported by the various institutions in the country to the Central Bank of Health Intelligence, Directorate General of Health Services are as under:—

Year	Cases	Deaths
1984	18042	355
1985	18459	432
1986	16559	535
1987	2131	583
1988	13112	286
(upto September, 1988)		

The Immunization Programme has been using imported Oral Polio Vaccine, since Polio Vaccine is not indigenously produced in India.

(b) to (d) Steps are being taken for indigenous manufacture of Oral Polio Vaccine (OPV) and Inactivated Polio Vaccine (IPV) in the country under the Technology Mission on Immunization. A proposal to set up two separate companies for indigenous production of OPV and other Viral Vaccines, including IPV, is under consideration of Government of India. Under this proposal, indigenously manufactured OPV and IPV is expected to become available by the year 1991-92.

Research activities of CCMB

1510. SHRI SURESH PACHOURI: Will the PRIME MINISTER be pleased to state:

(a) whether the Centre for Cellular and Molecular Biology (CCMB), Hyderabad has been funded for undertaking research activities in the frontier areas of biotechnology like cell division and malignant transformation, cell differentiation, protein degradation, study of integrated biological system and ribonucleases;

(b) if so, what are the details of specific projectwise funds provided to CCMB, Hyderabad over the past five years in each specific areas of biotechnology; and

(c) what is the upto date progress made in each of those specific research areas?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND THE MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K. R. NARAYANAN): (a) Yes, Sir. These research activities are in the frontier areas of modern biology.

(b) Project-wise details of funds cannot be indicated as most of the facilities are common to a large number of projects. The budget of the centre for the last 5 years is as follows:—

(Rs. in lakhs)

Year	Budget
1984-85	397 approx.
1985-86	570 ,,
1986-87	463 ,,
1987-88	565 ,,
1988-89	530 ,, (Budget Projection)

(c) The major progress in the last few years in each of these areas is as follows :

Cell division and malignant transformation

i. A comprehensive theoretical model has been developed at the CCMB which attempts to explain the mechanism of regulation of normal cell division and of malignant transformation, through control of the uptake of essential nutrients by a transport-inhibitory protein.

ii. A tumour associated transplantation antigen (TATA) has been identified and purified from the ZAH cell. Animals immunized with this antigen show partial protection against the tumour.

Protein degradation:

i. Two new proteases with unusual properties have been purified from bovine seminal plasma.

ii. Gene for seminal plasmin has been synthesised in the laboratory and its cloning is under progress.

Studies on integrated biological systems

(i) A technique (Photoacoustic spectroscopy) has been used to work out the mechanism by which chloroquine (the well known antimalarial drug) kills a malarial parasite, and what happens in chloroquine-resistance.

(ii) A general mathematical model for the life cycle of a cell using coupled biochemical reactions, has been formulated.

Ribonucleases:

(i) A high molecular weight ribonuclease has been purified from human milk.

(ii) A C-specific ribonuclease—the first of its kind—has also been purified to homogeneity from cobra venom.

Establishment of an All India Institute of Medical Sciences and Hospital

1511. SHRI CHITTA BASU: Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether Government have any proposal under its consideration for establishing an All India Institute of Medical Sciences and Hospital in memory of Dr. B. C. Roy; and

(b) if so, whether any decision has since been taken in this regard?

THE MINISTER OF STATE IN THE MINISTRY OF HEALTH AND FAMILY WELFARE (KUMARI SAROJ KHAPARDE): (a) No, Sir.

(b) Does not arise.

Establishment under DAE in Indore

1512. SHRI KAMAL MORARKA: Will the PRIME MINISTER be pleased to state:

(a) whether a big establishment of Department of Atomic Energy is being contemplated at Indore; and

(b) if so, the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND THE MINISTER OF STATE IN THE DEPARTMENTS OF OCEAN DEVELOPMENT, ATOMIC ENERGY, ELECTRONICS AND SPACE (SHRI K. R. NARAYANAN): (a) and (b) The Centre for Advanced Technology (CAT) set up at Indore by the Department of Atomic Energy is expected to be an important R & D establishment. The Centre is being set up at a total estimated cost of Rs. 62.66 crores during the 7th and 8th Plan periods and will deal mainly in frontier research on lasers and accelerators. About 1600 acres of land have been acquired for the Centre to locate its laboratories and housing colony. The establishment will employ about 775 persons of whom about 600 will belong to the scientific and technical category.